

**UNITED STATES DISTRICT COURT
DISTRICT OF NEW MEXICO**

UNITED STATES OF AMERICA,

Plaintiff,

vs.

No. 20-CR-1777 MV

DAKOTA BRISCOE,

Defendant.

MEMORANDUM OPINION AND ORDER

THIS MATTER is before the Court on Mr. Briscoe's Objection to the Government's Notice of Toolmark Expert [Doc. 149]. The government filed a response. Doc. 169. The Court held a *Daubert* hearing on November 7, 2023. Having carefully considered the briefs, testimony, oral arguments, and relevant law, and being otherwise fully informed, the Court finds that Mr. Briscoe's Objection is not well taken and will be overruled but orders the government to cabin the scope of Mr. Stuart's testimony, as detailed below.

BACKGROUND

Mr. Briscoe was charged in a Second Superseding Indictment on July 14, 2022 with, *inter alia*, two counts of Attempted Carjacking in violation of 18 U.S.C. § 2119(1), one count of Carjacking in violation of 18 U.S.C. § 2119(1), and one count of Using and Carrying a Firearm During and In Relation to a Crime of Violence, in violation of 18 U.S.C. § 924(c)(1)(A)(iii). Doc. 84. The case is set for trial on Counts 4 through 7 of the Second Superseding Indictment on December 4, 2023. Doc. 130. On October 16, 2023, the government filed a Notice of Intent to Offer Expert Testimony seeking to offer Mr. Jay Stuart as an expert in firearms and toolmark identification. Doc. 132 ("Notice"). On October 23, 2023, Mr. Briscoe filed an objection and

request for a *Daubert* hearing. Doc. 149. Mr. Briscoe argues first that the government’s notice did not comply with Rule 16 of the Federal Rules of Criminal Procedure because it did not give a sufficiently specific outline of the opinions that Mr. Stuart intends to give at trial. *Id.* at 5. Mr. Briscoe also argues that Mr. Stuart’s proposed testimony should not be admitted because it is unreliable, fails to meet the requirements of Rule 702 of the Federal Rules of Evidence, and would not assist a jury. *Id.* at 11. The government filed a response, asserting that its Notice complied with the requirements of Rule 16 and that Mr. Stuart’s testimony is admissible because it is relevant, falls outside of common knowledge, and is reliable. Doc. 169 at 5–6. This Court held a *Daubert* hearing on November 7, 2023.

DISCUSSION

I. The Government’s Notice Complied with the Requirements of Rule 16.

Mr. Briscoe first argues that the government’s Notice did not comply with the requirements of Rule 16. Doc. 149 at 3. Specifically, Mr. Briscoe argues the Notice does not set out a “complete statement of all opinions that the government will elicit from the witness in its case-in-chief” nor does it set out “the bases and reasons for those opinions.” *Id.* at 7. The government argues that it complied with Rule 16 by disclosing that Mr. Stuart “will opine that [the] casings were fired from the same firearm.” Doc. 169 at 3. For the following reasons, the Court finds that the government’s Notice complied with the requirements of Rule 16.

A. Legal Standard

When the government seeks to introduce an expert witness, Rule 16(a)(1)(G) states that “[a]t the defendant’s request, the government must give to the defendant a written summary of any testimony that the government intends to use under Rule[] 702.” Fed. R. Crim. P. 16(a)(1)(G). The summary “must describe the witness’s opinions, the bases and reasons for those opinions, and the

witness’s qualifications.” *Id.* The Tenth Circuit has interpreted this rule to require only a general description of the opinions and the bases and reasons for the opinions, such that the disclosure allows the defense to prepare for cross-examination. *United States v. Nacchio*, 519 F.3d 1140, 1151 (10th Cir. 2008) (*Nacchio I*), *vacated on other grounds by United States v. Nacchio*, 555 F.3d 1234 (10th Cir. 2009) (*Nacchio II*) (“Rule 16 is designed to give opposing counsel notice that expert testimony will be presented, permitting more complete pretrial preparation by the opposing side.”). Accordingly, Rule 16 does not require “extensive discussion of a witness’s methodology.” *Nacchio I*, 519 F.3d at 1151; *see also United States v. McCluskey*, 954 F. Supp. 2d 1224, 1231 (D.N.M. 2013) (finding that the notice need only “permit preparation for cross-examination and presentation of opposing experts,” but need not provide a “[d]etailed, extensive discussion . . . track[ing] the methodological factors set forth by the *Daubert* Court”). However, the government must disclose the specific opinions that will be elicited and not simply provide a general description of the topics that will be covered. *United States v. Tao*, No. 19-cr-20052, 2022 WL 252019, at *11 (D. Kan. Jan. 27, 2022).

For example, in *United States v. Brown*, the government’s notice stated that a proposed fingerprint examiner expert “will testify that she compared the defendant’s known fingerprints found on fingerprints [sic] cards with a latent fingerprint found” on a job application, and “will testify the latent fingerprint on the job application is the defendant’s fingerprint.” 592 F.3d 1088, 1089 n.2 (10th Cir. 2009). The Tenth Circuit found that this disclosure substantially complied with Rule 16 because the notice stated the expert’s opinion and described the anticipated testimony—that “the fingerprint found at the scene of the crime matched Brown’s.” *Id.* at 1091. Similarly, in *McCluskey*, the court found that the reports disclosed to the defendant, including statements that a proposed DNA expert will “testify to her opinion that, ‘[t]o a reasonable degree

of scientific certainty,’ John McCluskey is the source of the major DNA profile obtained from items 1B22A, 1B22B, 1B22C, and 1B39A,” were sufficient to notify the defendant of the expert’s opinions. *McCluskey*, 954 F. Supp. 2d at 1231. Additionally, the court found that the disclosure of approximately “70 pages of methodology, testing analysis, results, notes, and a national match detail report” was sufficient to describe “the bases and reasons for those opinions” under Rule 16. *Id.* at 1230-31. And in *United States v. Goxcon-Chagal*, the government’s notice stated that the proposed expert, a DEA special agent, would (1) testify “that the quantity of methamphetamine in question is a distributable amount, as opposed to a personal use amount,” (2) “quantify the monetary value of the seized methamphetamine,” and (3) “offer testimony regarding general aspects of narcotics investigations.” 886 F. Supp. 2d 1222, 1253–54 (D.N.M. 2012), *aff’d sub nom. United States v. Medina-Copete*, 757 F.3d 1092 (10th Cir. 2014). While the court acknowledged “that the Notice is not as specific as it could be, the [c]ourt [did] not believe that it [was] so deficient as to require a sanction.” *Id.* at 1254. Together, these cases show that “Rule 16 disclosures are not required to include the extensive and exhaustive level of detail and information for which Defendant is arguing.” *McCluskey*, 954 F. Supp. 2d at 1232. Finally, the “[p]rovision of the expert’s curriculum vitae satisfies the requirement of Rule 16 to include a description of the witness’s qualifications.” *Id.* at 1231.

“If a party fails to comply with a discovery request, the district court may order sanctions, including (1) issuance of an order demanding compliance, (2) grant of a continuance, (3) exclusion of undisclosed evidence, or (4) the imposition of any other just order.” *United States v. Brown*, 592 F.3d 1088, 1090 (10th Cir. 2009); *see also* Fed. R. Crim. P. 16(d)(2)(C), (D). The Tenth Circuit has identified three factors to determine the appropriate sanction for a Rule 16 violation: “(1) the reasons the government delayed producing the requested materials, including whether or not the

government acted in bad faith when it failed to comply with the discovery order; (2) the extent of prejudice to the defendant as a result of the government's delay; and (3) the feasibility of curing the prejudice with a continuance." *United States v. Wicker*, 848 F.2d 1059, 1061 (10th Cir. 1988). The Tenth Circuit has "also noted that these three factors should merely guide the district court in its consideration of sanctions." *United States v. Banks*, 761 F.3d 1163, 1198–99 (10th Cir. 2014) (citations and quotations omitted). "Frequently it will be found that the party who requested disclosure has not been prejudiced and that no sanction is needed." *United States v. Charley*, 189 F.3d 1251, 1262 (10th Cir. 1999).

B. Analysis

Here, the government's Notice included Mr. Stuart's curriculum vitae, a copy of his report and a description of the items Mr. Stuart examined. Doc. 132 at 1. In the Notice, the government disclosed that Mr. Stuart examined firearm casings that had been fired at and recovered from the following scenes: the August 28, 2020 shooting involving Mr. Briscoe's car; the August 28, 2020 shooting at John Doe's home; the September 7, 2020 double-homicide; and the September 7, 2020 shooting at Jane Doe 3's home. *Id.* at 2. The Notice further stated that "based on that examination, he will opine that these casings were fired from the same firearm" and that "Mr. Stuart will be able to make this opinion based on agreeing class characteristics of the items of evidence that he examined." *Id.* Mr. Briscoe argues that the Notice was not in compliance with Rule 16 because Mr. Stuart's report failed to set out his methodology and merely states that the bullets and casings "were identified in a single, as yet unknown firearm based upon sufficient agreement of individual characteristics." Doc. 149 at 8. He argues that the Notice is deficient because it does not make clear what constitutes "sufficient agreement." *Id.*

The Court finds that the Notice substantially complied with the requirements of Rule

16(a)(1)(G). First, the provision of Mr. Stuart’s curriculum vitae satisfied the requirement of Rule 16 to include a description of the witness’s qualifications. *McCluskey*, 954 F. Supp. 2d at 1231. Secondly, the Notice describes Mr. Stuart’s opinion, namely that he will opine that the casings from several shootings on September 7, 2020 were fired from the same firearm. The written conclusions in the report do not explain the methodology Mr. Stuart used to examine the casings and bullets. Government’s Exhibit B at 1–8 (“Exh. B”). However, the report includes cartridge casing worksheets with Mr. Stuart’s handwritten notes about the characteristics of each casing and bullet. Exh. B at 33–42. The report also contains a hand-drawn diagram that appears to group each casing according to the characteristics described in the casing worksheets. *Id.* at 42. From the reports, it is not clear which toolmark method Mr. Stuart used, but the government clarified in its response that he used the AFTE Theory of Identification. Doc. 169 at 6.

Although the Notice is not “as specific as it could be,” *Goxcon-Chagal*, 886 F. Supp. 2d at 1253–54, the government met its burden under Rule 16. In *Brown*, the Court held that the government’s notice was sufficient where the notice described the anticipated testimony, namely that the expert would opine that the fingerprints he examined were a match. 592 F.3d at 1901. The Tenth Circuit held that this disclosure was sufficient even though the expert’s report “failed to mention fourteen identical points of comparison or specifically describe the expert’s methodology.” *Id.* Arguably, Mr. Stuart’s report is more detailed than the disclosure in *Brown*, as his report contains handwritten notes concerning each point of comparison on the casings. Exh. B at 33–42. *See also*, *McCluskey*, 954 F. Supp. 2d (finding that the disclosure was sufficient where the notice included the expert’s 70-page report with analysis, notes, and results).

Even if the Notice was unclear in the first instance, at the *Daubert* hearing, the government clarified that Mr. Stuart will not testify about the casings discovered at the scenes of the August

28, 2020 shootings, but will testify that the casings recovered from the scene at Jane Doe 3's home came from the same firearm as the casings at the scene of the double-homicide. Rough Hearing Transcript ("Hr'g Tr.") at 95:16–21.¹ The government also clarified at the hearing that Mr. Stuart's findings were based on sufficient agreement of individual characteristics, not sufficient agreement of class characteristics. *Id.* at 66: 9–14. The defense was also able to thoroughly cross-examine Mr. Stuart at the *Daubert* hearing. Doc. 189. Accordingly, any potential prejudice to the defense has been cured. *Charley*, 189 F.3d at 1262 (prejudice to the defense was cured when defense counsel was able to ask questions of prosecution's experts ahead of trial).

Thus, the Court finds that the government's Notice, although it was not as specific as it could have been, substantially complied with Rule 16, and that any potential prejudice to the defense was cured at the *Daubert* hearing.

II. Mr. Stuart Will Be Allowed to Testify, but His Testimony Will Be Limited.

Mr. Briscoe argues that Mr. Stuart's testimony should be suppressed because it is not reliable under Rule 702. Doc. 149 at 11. In particular, Mr. Briscoe argues that Mr. Stuart's testimony will be unreliable because several federal and state courts, the National Research Council of the National Academies of Science ("NRC"), and the President's Council of Advisors on Science and Technology ("PCAST") have all criticized the validity of such "toolmark" evidence. *Id.* at 18. The government disagrees, noting that the Tenth Circuit recognized the reliability of firearm and toolmark examination in *United States v. Hunt*, 63 F.4th 1229 (10th Cir. 2023). Doc. 169 at 5. For the following reasons, the Court finds that Mr. Stuart may testify at trial as an expert, but that his testimony must be limited.

¹ The Court's citations to the transcript refer to the court reporter's original, unedited version; any final transcripts may contain slightly different page and/or line numbers.

A. Legal Standard

Under Rule 702, witnesses with the requisite “knowledge, skill, experience, training, or education” may provide expert testimony if:

- (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. The proponent of the expert testimony has the burden of showing that it is admissible by a preponderance of the evidence. *Daubert v. Merrell Down Pharmaceuticals, Inc.*, 509 U.S. 579, 592 n.10 (1993); *United States v. Orr*, 692 F.3d 1079, 1091 (10th Cir. 2012); Fed. R. Evid. 702 Advisory Committee’s Note.

In the past, Courts have held that the Federal Rules of Evidence “encourage the admission of expert testimony.” *See, e.g., United States v. Channon*, No. 13-cr-966, 2015 WL 13666980, at *3 (D.N.M. Jan. 8, 2015) (quoting 4 Jack B. Weinstein & Margaret A. Berger, *Weinstein’s Federal Evidence* § 702.02[1] (Joseph M. McLaughlin, ed., Matthew Bender 2d ed. 2012)). Thus, Courts operated on the presumption “that expert testimony is admissible.” *Id.* (quoting 4 Weinstein & Berger, *supra*, § 702.02[1]). However, amendments to Rule 702 are set to take effect on December 1, 2023. Among the proposed amendments, the Advisory Committee has proposed a change to Rule 702(b) and (d) so that a proponent of expert testimony must demonstrate that it is “more likely than not” that “the testimony is based on sufficient facts or data” and “the expert’s opinion reflects a reliable application of the principles and methods to the facts of the case.” Proposed Amendments to the Federal Rules of Evidence, Rule 702. In support of this change, the Committee noted that the changes “respond to the fact that many courts have declared the requirements set forth in Rule 702(b) and (d) . . . are questions of weight and not admissibility, and more broadly

that expert testimony is presumed to be admissible.” May 15, 2022 Report of the Advisory Committee on Evidence Rules. The Committee found that “these statements misstate Rule 702, because its admissibility requirements must be established to a court by a preponderance of the evidence.” *Id.* Further, the Committee wrote that “the language of the amendment more clearly empowers the court to pass judgment on the conclusion that the expert has drawn from the methodology.” *Id.* Although the Court in *Daubert* explained that “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence,” 509 U.S. at 596, the amendments to Rule 702 stand for the proposition that “judicial gatekeeping is essential” because “jurors may lack the specialized knowledge to determine whether the conclusions of an expert go beyond what the expert’s basis and methodology reliably support.” Proposed Amendments to the Federal Rules of Evidence, Rule 702, Committee Note (2).

In assessing the admissibility of a proposed expert’s testimony, a trial court “generally must first determine whether the expert is qualified.” *United States v. Avitia–Guillen*, 680 F.3d 1253, 1256 (10th Cir. 2012) (internal quotations and citations omitted). “If the expert is sufficiently qualified, then the court must determine whether the expert’s opinion is reliable by assessing the underlying reasoning and methodology.” *Id.* To be admissible under Rule 702, evidence must be both relevant and reliable. *Daubert*, 509 U.S. at 589. The trial judge is to maintain a gatekeeping function, only admitting evidence that is both relevant and reliable. *Id.* at 597. The Supreme Court in *Kumho Tire Co., Ltd. v. Carmichael* extended the holding in *Daubert* such that the trial judge’s gatekeeping function applies not only to testimony based on scientific knowledge but also to testimony based on technical and other specialized knowledge. 526 U.S. 137, 141 (1999).

Evidence is relevant if it has “any tendency to make a fact more or less probable than it

would be without the evidence.” Fed. R. Evid. 401. In the context of Rule 702, the expert must provide testimony based on their specialized knowledge that is “beyond the ken of the average juror.” *United States v. Michael*, No. 06-cr-1833, 2007 WL 9657855, at *3 (D.N.M. Nov. 15, 2007) (quoting *United States v. Tapia-Ortiz*, 23 F.3d 738, 740–41 (2d Cir. 1994)). In other words, to be relevant, the expert’s testimony must “help the trier of fact to understand evidence or determine a fact in issue.” Fed. R. Evid. 702(a).

The Supreme Court in *Daubert* set forth a non-exclusive list of factors that a court may consider in determining reliability, including: (1) whether the theory or technique can be, and has been, tested; (2) whether the theory has been subjected to peer review and publication; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique’s operation; and (5) whether the theory is generally accepted in the relevant scientific community. 509 U.S. at 593–94; *see also Kumho Tire Co.*, 526 U.S. at 141. The trial court need not apply all of these factors, *Avitia–Guillen*, 680 F.3d at 1258, and may consider additional relevant factors, *Kumho Tire*, 526 U.S. at 149–50. The Supreme Court has also emphasized that the inquiry is meant to be a flexible one, focused on principles and methodology rather than the conclusions that are generated. *Daubert*, 509 U.S. at 595–96. The *Kumho Tire* Court reiterated that the test is flexible and held that a trial court has “the same broad latitude when it decides *how* to determine reliability as it enjoys in respect to its ultimately reliability determination.” *Kumho Tire Co.*, 526 U.S. at 141–42. The factors enumerated in *Daubert* are not intended to be a “definitive checklist or test,” but rather they should guide the trial judge in determining whether expert testimony is reliable. *Id.* at 150–52.

B. Background and Law Regarding Toolmark Examination and Identification

To assess Mr. Briscoe’s *Daubert* challenge, it is helpful first to understand the field of

toolmark evidence. Firearms analysts “attempt to determine whether ammunition is or is not associated with a specific firearm based on ‘toolmarks’ produced by guns on the ammunition.” PRESIDENT’S COUNCIL OF ADVISORS ON SCI. & TECH., EXEC. OFFICE OF THE PRESIDENT, FORENSIC SCI. IN CRIM. COURTS: ENSURING SCI. VALIDITY OF FEATURE COMPARISON METHODS 11 (2016) (“PCAST Report”). The discipline of firearms analysis is based on the idea that toolmarks produced by firearms vary substantially enough to allow certain marks to be identified with certain individual firearms. *Id.* Specifically, spiral grooves are typically cut into gun barrels and individual imperfections produced during the tool-cutting process and through “wear and tear” leave toolmarks on cases and bullets as they are shot through the firearm. *Id.* at 104.

To compare toolmarks, examiners typically test guns recovered from crime scenes and compare marks on the bullets and casings recovered from the scene against the bullets fired in a lab setting. NATIONAL RESEARCH COUNCIL, STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD 150 (2009) (“NRC Report”). Examiners first look at the class characteristics of marks made on bullets and casings, “which are features that are permanent and pre-determined before manufacture.” *Id.* Class characteristics are “family resemblances which will be present in all weapons of the same make and model.” *United States v. Willock*, 696 F. Supp. 2d 536, 557-58 (D. Md. 2010) (internal quotations marks omitted). If class characteristics are similar, the examiner proceeds to identify and compare subclass and individual characteristics. PCAST Report at 11. Subclass characteristics “arise when manufacturing processes create batches of tools with similarities in appearance, size, or surface finish distinguishing them from other tools of the same type.” Adina Schwartz, *A Systemic Challenge to the Reliability and Admissibility of Firearms and Toolmark Identification*, 6 Colum. Sci. & Tech. L. Rev. 1, 5 (2005) (“Schwartz, *A Systemic Challenge*”). Individual characteristics are claimed to be “unique to the toolmarks each individual

tool produces.” *Id.* These toolmarks are said to “correspond to random imperfections or irregularities on tool surfaces” produced by either the manufacturing processes or continued use of the firearm. *Id.*

The controlling standard in toolmark identification is The Association of Firearm and Tool Mark Examiners (“AFTE”) Theory of Identification (“AFTE Theory”). An examiner applying the AFTE Theory may conclude that two pieces of evidence are of a common origin “when the unique surface contours of two toolmarks are in ‘sufficient agreement.’” *Theory of Identification as It Relates to Toolmarks: Revised*, 43 AFTE J. 287 (2011). “Sufficient agreement” of two toolmarks means that the individual characteristics of the toolmarks are “of a quantity and quality that the likelihood another tool could have made the mark is so remote as to be considered a practical impossibility.” *Id.*

The validity of toolmark examination has come into question in recent years. In 2009, the NRC criticized the discipline of toolmark examination, emphasizing the “lack of a precisely defined process.” NRC Report at 155. Although the NRC Report recognized that toolmark examination can be valuable, it noted that “additional studies should be performed to make the process of individualization more precise and repeatable.” *Id.* at 154. The 2016 PCAST Report noted that the AFTE Theory is circular, as it allows for an examiner to conclude that two items have a common origin based solely on a determination that the marks are extremely unlikely to have a different origin. PCAST Report at 104. Further, the report noted that the AFTE Theory explicitly states that conclusions about firearm identification are “subjective.” *Id.* After analyzing several studies designed to test the rate of false positive identifications, the PCAST Report concluded that “most of these studies involved designs that are not appropriate for assessing the scientific validity or estimating the reliability of the method” of toolmark examination. *Id.* at 111.

Accordingly, the Report found that “the current evidence falls short of the scientific criteria for foundational validity.” *Id.* However, the Report ultimately concluded that “[w]hether firearms analysis should be deemed admissible based on current evidence is a decision that belongs to the courts.” *Id.* at 112.

In 2020, responding to criticisms of toolmark analysis, the Department of Justice (“DOJ”) released its Uniform Language for Testimony and Reports for the Forensic Firearms/Toolmarks Discipline Pattern Examination (“DOJ Language”). The report proscribes certain kinds of toolmark testimony. For instance, the DOJ Language report states that “an examiner shall not . . . assert that two toolmarks originated from the same source to the exclusion of all other sources.” DOJ Language at 3. Additionally, examiners

shall not assert that two toolmarks originated from the same source with absolute or 100% certainty or use the expressions ‘reasonable degree of scientific certainty,’ ‘reasonable scientific certainty,’ or similar assertions of reasonable certainty in either reports or testimony unless required to do so by a judge or applicable law.

Id. Notably, the report states that these are just guidelines, and that they should “not be construed to imply that the use of different terminology or definitions by non-Departmental forensic laboratories or individuals is erroneous, incorrect, or indefensible.” *Id.*

In its recent decision in *Hunt*, the Tenth Circuit acknowledged criticisms of the field of toolmark examination and urged courts “to be cautious” when admitting testimony from toolmark examiners. 63 F.4th at 1244. Although the Court found that the district court did not err in admitting the expert testimony, it closely analyzed the particular method the expert used to draw his conclusion that the spent cartridges found at the crime scene came from the same gun. *Id.* at 1245. Notably, the district court in *Hunt* limited the experts’ testimony, holding that the experts would need to “refrain from expressing their findings in terms of absolute certainty, and they [would] not state or imply that a particular bullet or shell casing could only have been discharged

from a particular firearm to the exclusion of all other firearms in the world.” *Id.* at 1241.

While it appears that no federal court has completely barred testimony from a qualified toolmark identification expert, many district courts have limited the testimony that firearms experts may give. For instance, in *United States v. Davis*, the district court limited the testimony of the firearms expert, holding that the expert could not opine that certain cartridges were fired by the same gun, nor that a cartridge case was a “match” to other cases or firearms. No. 18-cr-11, 2019 WL 4306971, *6 (W.D. Va. 2019). The district court in *Davis* noted that the limitation was warranted due to “the subjectivity of the field and the lack of any established methodology, error rate, or statistical foundation for firearm identification experts’ conclusions.” *Id.* The district court in *United States v. Shipp* also prohibited the expert from testifying that a particular firearm was the source of the bullet fragment and casing recovered at the crime scene. 422 F. Supp. 3d 762, 783 (E.D.N.Y. 2019). Notably, the *Shipp* court found that the potential rate of error for matching ballistics, the subjective and circular nature of the AFTE Theory, and the lack of general acceptance of toolmark examination in the scientific community all weighed towards finding that the expert’s testimony would not be reliable. *Id.* at 777–83; *see also United States v. Monteiro*, 407 F. Supp. 2d 351, 375 (D. Mass. 2006) (holding that the firearms expert could not testify that there was a match to an exact statistical certainty); *United States v. Glynn*, 578 F. Supp. 2d 567, 570 (S.D.N.Y. 2008) (holding that the firearm expert could only testify that casings were more likely than not a match to a particular firearm).

C. *Daubert* analysis

To be admissible under Rule 702, Mr. Stuart must be a qualified expert, and his testimony must be both relevant and reliable. *Daubert*, 509 U.S. at 589. The defense does not challenge Mr. Stuart’s qualifications. Mr. Stuart has a Bachelor of Science degree in Chemistry with an emphasis

in Criminalistics from the Metropolitan State College of Denver, Colorado. Government's Exhibit A at 1 ("Exh. A"). Since 2010, he has worked as a forensic scientist for the Albuquerque Police Department and is currently the Technical Leader for the Firearm/Toolmark Unit. *Id.* He also has several certifications, including certifications from the AFTE for Firearm Examination and Identification, Gunshot Residue Examination and Identification, and Toolmark Examination and Identification. *Id.* at 2. At the *Daubert* hearing, Mr. Stuart testified that he has over 1,000 hours of training in firearm and toolmark examination. H'rg Tr. 12:1–3. He further testified that he is trained by the ANSI National Accreditation Board "to assess other laboratories' firearm and toolmark units for accreditation purposes." *Id.* at 14:2–3. Professionally, he is an active member of three affiliation groups: the AFTE; the American Academy of Forensic Sciences (AAFS); and the Southwestern Association of Forensic Scientists ("SWAFS"). Exh. A at 3. He was previously a member of the American Academy of Forensic Sciences ("AAFS") and the American Society of Crime Laboratory Directors ("ASCLD"). *Id.* Between 2002 and 2023, he participated in 60 trainings. *Id.* at 3–7. He has seven publications relating to firearm and toolmark evidence. *Id.* at 9. He received an AFTE Presidential Recognition in 2016 and 2022. *Id.* at 1. Mr. Stuart has testified as an expert in a total of 59 cases, in both state and federal courts. Given his experience and training, the Court finds that Mr. Stuart is a qualified expert in firearm examination and toolmark analysis.

With respect to relevance, the government states that Mr. Stuart will opine that the casings discovered at the scene of the double-homicide on September 7, 2020 and at the scene of Jane Doe 3's home were fired from the same firearm. Doc. 132 at 2. The government argues that this testimony will help the jury determine whether Mr. Briscoe possessed and discharged a firearm in relation to the carjackings on September 7, 2020. Doc. 169 at 6. As noted above, to be relevant, an

expert's testimony must "help the trier of fact to understand evidence or determine a fact in issue." Fed. R. Evid. 702(a). By affirming the district court's decision to admit expert toolmark evidence, the *Hunt* Court implicitly found that an expert's testimony that casings recovered from the scene were fired from the same (unrecovered) weapon was relevant in a trial on felon-in-possession charges. 63 F.4th at 1233. Other circuits have also found that toolmark evidence is relevant in cases where defendants are accused of possessing and/or discharging a weapon. *See, e.g., United States v. Otero*, 557 F. App'x 146, 148 (3d Cir. 2014) (unpublished) (toolmark evidence was relevant in trial for armed robbery); *United States v. Williams*, 506 F.3d 151, 160 (2d Cir. 2007) (toolmark evidence was relevant in trial for murder). Thus, Mr. Stuart's testimony would be relevant to the jury's determination of whether Mr. Briscoe not only possessed but also in fact *discharged* a firearm in relation to the carjacking.

With respect to reliability, however, the Court finds that Mr. Stuart's opinion that the casings were fired from the same firearm does not reflect a reliable application of the principles and methods of the AFTE theory of identification to the facts of this case, as required by Rule 702(d). First, a review of the *Daubert* factors presents serious doubts as to the reliability of the AFTE theory in general. Mindful of the *Hunt* Court's admonition that district courts be cautious in accepting the reliability of the AFTE method wholesale and admitting toolmark analysis testimony, the Court finds that an examination of Mr. Stuart's particular methodology does not support the conclusion that the casings were fired from the same firearm, nor even the conclusion that it is *likely* they were fired from the same firearm.

1. Testing of the AFTE Theory

The first factor under *Daubert* is whether a technique "can be (and has been) tested." *Daubert*, 509 U.S. at 592. Here, Mr. Stuart testified that he participated in a research project where

1,260 firearms were test fired and analysts compared their results with the results generated by a computer database. H’rg Tr. 16:15–17:21. As the Court in *Hunt* noted, after the NRC and PCAST reports, several studies were conducted to assess the validity of the AFTE Theory. 63 F.4th at 1237. For instance, one study tested 218 firearm examiners to determine the rate of false-positives in toolmark identifications. *Id.*; David. P. Baldwin et al., *A Study of False-Positive and False-Negative Error Rates in Cartridge Case Comparisons*, Ames Laboratory, USDOE Technical Report # IS-5207 (2014) (“Ames Study”). Although the PCAST report recognized that the AFTE Theory has been tested in several studies, it noted that “many of the studies were not appropriate for assessing scientific validity and estimating the reliability.” PCAST Report at 106. Nevertheless, several courts have recognized that the AFTE Theory has been repeatedly tested. *See, e.g., Shipp*, 422 F. Supp. 3d at 776; *Willock*, 696 F. Supp. 2d at 570; *Hunt*, 63 F.4th at 1238; *United States v. Taylor*, 663 F. Supp. 2d 1170, 1176 (D.N.M. 2009) (“[T]he methods underlying firearms identification can, at least to some degree, be tested and reproduced.”). Because the “probative value of different study designs is more appropriately considered as part of the discussion of the method’s error rate,” the Court finds that the AFTE Theory has been tested and this factor weighs in favor of reliability. *Shipp*, 422 F. Supp. 3d at 775.

2. Whether Toolmark Analysis Has Been Subjected to Peer Review

The second *Daubert* factor is whether the AFTE Theory has been subjected to peer review and publication. *Daubert*, 509 U.S. at 594. Although several courts have determined that the AFTE Theory has been subjected to peer review, many placed significant weight on the AFTE’s own journal. *See, e.g., Monteiro*, 407 F. Supp. 2d at 367 (“The AFTE publishes a peer-reviewed journal, aptly named the AFTE Journal, which contains numerous articles validating the current technique of firearm identification.”); *United States v. Ashburn*, 88 F. Supp. 3d 239, 246 (E.D.N.Y. 2015)

(“The AFTE itself publishes within the field of toolmark and firearms identification.”). Indeed, the vast majority of articles and studies on toolmark analysis are published in the AFTE Journal. *United States v. Tibbs*, No. 2016-CF1-19431, 2019 WL 4359486, at *9 (D.C. Super. Sept. 5, 2019),

However, other courts have challenged the quality of the AFTE Journal’s peer review process. For instance, the Court in *Shipp* noted that reviewers for the journal were all members of the AFTE and thus “have a vested, career-based interest in publishing studies that validate their own field and methodologies.” 422 F. Supp. 3d at 776 (citation omitted). In *Tibbs*, the Court raised several concerns about the AFTE Journal’s peer review process. 2019 WL 4359486, at *9. In particular, the Court noted that the AFTE Journal’s review process is “far less meaningful” than the processes of other journals because “the review process itself is ‘open,’ meaning that both the author and reviewer know the other’s identity and may contact each other during the review process.” *Id.* The prosecution’s experts in *Tibbs* admitted that such a process is highly unusual for the publication of empirical scientific research, noting that double-blind peer review is the standard among scientific publications to guard against personal and institutional biases. *Id.* Second, the *Tibbs* Court emphasized that the AFTE does not make the journal generally available to the public or to the world of possible reviewers and commentators outside of the organization’s membership. *Id.* Notably, unlike other journals, the AFTE Journal “cannot even be obtained in university libraries.” *Id.* Critics have noted that due to the professional nature of the AFTE organization, the open peer review status of the journal, and its lack of availability to the public, the journal is “comparable to talk within congregations of true believers” rather than an example of “the desired scientific practice of critical review and debate.” David H. Kaye, *How Daubert and Its Progeny Have Failed Criminalistics Evidence and a Few Things the Judiciary Could Do About It*, 86 Fordham L. Rev. 1639, 1645 (2018).

Nevertheless, it appears that there are a number of double-blind peer-reviewed studies on error rates and other topics in the field of toolmark analysis. *See, e.g.,* Wei Chu, et al., *Pilot Study of Automated Bullet Signature Identification Based on Topography Measurements and Correlations*, 55 J. Forensic. Sci. 341 (2010); James E. Hamby et. al., *A Worldwide Study of Bullets Fired from 10 Consecutively Rifled 9MM Ruger Pistol Barrels—Analysis of Examiner Error Rate*, 64 J. Forensic Sci. 551 (2019); Tasha P. Smith et al., *A Validation Study of Bullet and Cartridge Case Comparisons Using Samples Representative of Actual Casework*, 61 J. Forensic Sci. 692 (2016). Thus, the Court finds that the AFTE Theory has been peer-reviewed but notes a troubling trend in courts taking the existence of publications in the AFTE Journal at face value. Instead, the Court looks to the existence of double-blind peer-reviewed studies in journals that are publicly available for the scientific community more broadly.

3. The Error Rate for Toolmark Analysis

The third *Daubert* factor considers the “known or potential rate of error” of the AFTE Theory. *Daubert*, 509 U.S. at 594. The PCAST Report found that “because firearms analysis is at present a subjective feature-comparison method, its foundational validity can *only* be established through multiple independent black box studies.” PCAST Report at 106 (emphasis in original). “Black-box studies” are those in which multiple examiners make decisions about many independent tests and an error rate is determined. *Id.* at 18–19. The PCAST Report identified one black-box study of toolmark examination, the “Ames Study.” *Id.* at 110. In the Ames Study, 218 examiners were presented with 15 separate comparison problems where they received one questioned sample and three test fires from the same known gun, which might or might not have been the source of the questioned sample. *Id.* The false-positive rate came out to an estimated 1.5–2.2%. *Id.* at 111. This means that an expert may incorrectly conclude that a recovered piece of

ballistics evidence matches a test fire in one out of every 46 examinations. *Id.* For comparison, the estimated error rate in DNA comparisons of single source samples is as rare as one in 10 billion. *Id.* at 72–73. As one court has noted, “a 1.5 percent error rate would mean that 1 in 67 convictions were wrong” and “2.2 percent would mean that 1 in 46 convictions were wrong.” *United States v. Adams*, 444 F. Supp. 3d 1248, 1264 (D. Or. 2020). It is particularly troubling that these error rates arise “from studies that most closely resemble the real-world conditions of toolmark testing.” *Id.* Even the error rates reported in black-box studies of toolmark analysis are questionable, as many studies count inconclusive responses as correct without explanation or justification. Schwartz, *A Systemic Challenge*, *supra* at 24. Accordingly, this factor weighs against finding that toolmark analysis under the AFTE Theory is reliable.

4. Existence and Maintenance of Standards in Toolmark Analysis

The fourth *Daubert* factor is “the existence and maintenance of standards controlling the technique’s operation.” *Daubert*, 509 U.S. at 594. As noted above, the controlling standard in toolmark identification is the AFTE Theory, under which casings can be said to come from a particular firearm or the same firearm if there is sufficient agreement of individual characteristics. *Theory of Identification*, 43 AFTE J. at 287. There is no specific guidance as to what constitutes “sufficient agreement” other than that it means the examiner has determined that the marks are unlikely to have come from different guns. The NRC and PCAST Reports, as well as other studies, have criticized the AFTE Theory because it is circular and subjective. Similarly, courts have criticized the AFTE Theory as being “either tautological or wholly subjective.” *United States v. Johnson*, 2019 WL 1130258, at *12 (S.D.N.Y. March 11, 2019); *see also Monteiro*, 407 F. Supp. 2d at 369–71 (noting the absence of a “universal standard for when an examiner may declare a ‘match’”); *United States v. Green*, 405 F. Supp. 2d 104, 114 (D. Mass. 2005) (finding that the

AFTE Theory is subjective). The AFTE itself recognizes that the ultimate determination is subjective and is based on the examiner's training and experience. *Theory of Identification*, 43 AFTE J. at 287.

At the *Daubert* hearing, Mr. Stuart conceded that the practice of toolmark analysis and identification is subjective and that it depends largely on a “you know when you see it” methodology. Hr’g Tr. at 79:4–13. When asked whether “It’s a subjective evaluation that you’re making when you have a *feeling* that there’s a sufficient amount of comparison for you to say that this is a match,” Mr. Stuart responded, “Definitely.” *Id.* at 77:16–19. He also confirmed that there are no quantitative criteria for the number of individual characteristics required for an examiner to conclude that casings were fired from the same firearm. *Id.* at 78:8–9 (Q: “So when you say there’s sufficient agreement, there’s really no industry standard that gives us a quantitative or qualitative assessment of what that consists of, correct?” A: “Correct.”). Notably, the *Hunt* Court found that the specific method used by the expert in the case before it, the consecutive-matching-striae method (“CMS method”), was reliable in part because “finding six or more consecutive striae that match is sufficient to determine that two cartridges were fired from the same weapon.” 64 F.4th at 1245. Thus, the CMS method has some quantitative criteria for a match while the AFTE Theory of Identification, the method Mr. Stuart employed here, does not.

Some courts have found that toolmark analysis is reliable despite the subjectivity inherent in the AFTE Theory, noting that many fields, such as medicine or psychology, depend on some degree of subjectivity. *See, e.g., United States v. Simmons*, No. 16-cr-130, 2018 WL 188287, at *5 (E.D. Va. 2018) (“The Court finds that all technical fields which require the testimony of expert witnesses engender *some* degree of subjectivity . . . which is based on specialized training, education, and relevant work experience.”); *United States v. Romero-Lobato*, 379 F. Supp. 3d 1111

(D. Nev. 2019) (finding that a requirement that experts quantify their opinion with statistical probability “would, in most circumstances, exclude psychologists, physicians, and lawyers from testifying as expert witnesses”). However, the comparison is inapposite. “[T]here is a distinction between, for example, a psychologist testifying as to whether a defendant is competent to stand trial and a firearms examiner testifying as to whether two bullets were fired from the same firearm.” *Shipp*, 422 F. Supp. 3d at 780. Psychologists, medical professionals, and lawyers are often asked to resolve *inherently ambiguous questions*, as to which qualified experts could disagree, such as whether a defendant meets a particular diagnosis, or whether a defendant is competent to stand trial. However, toolmark examiners place themselves more along the lines of DNA experts, as they are attempting to answer an unambiguous question, namely, whether two casings or bullets were fired from the same source. PCAST Report at 105 (“Firearms analysts have long stated that their discipline has near-perfect accuracy.”). However, unlike DNA experts, toolmark analysts rely primarily on their own experience and training to answer such questions. As the PCAST Report notes,

‘Experience’ is an inadequate foundation for drawing judgements about whether two sets of features could have been produced by . . . different sources. Even if examiners could recall in sufficient detail all the patterns or sets of features that they have seen, they would have no way of knowing accurately in which cases two patterns actually came from different sources, because the correct answers are rarely known in casework.

PCAST Report at 61. The subjectivity in the field of toolmark analysis is thus concerning where experts purport to be able to “match” casings or identify one firearm as the source of a toolmark to the exclusion of all other firearms.

More concerning in the instant case is the fact that “firearms and toolmark examiners have also failed to develop any rules for distinguishing subclass and individual characteristics.” Schwartz, *A Systemic Challenge*, *supra*, at 9. As described above, subclass characteristics are the

product of manufacturing processes that create batches of tools with the same characteristics that may produce the same toolmarks. *Id.* Individual characteristics are claimed to be toolmarks that are unique to a particular firearm. *Id.* A risk of misidentification arises when examiners confuse subclass characteristics (common to a batch of firearms that underwent the same manufacturing processes) with individual characteristics (marks that are unique to a particular firearm). *Id.* Indeed, AFTE members themselves have noted that “some matching processes are capable of reproducing remarkably similar surface characteristics . . . which if not recognized and properly evaluated could lead to a false identification.” *Id.* (quoting Alfred A. Biasotti & John Murdock, *Criteria for Identification or State of Firearms and Toolmark Identification*, 164 AFTE J. 16, 17 (1984)). Although the AFTE Theory indicates that “caution should be exercised in distinguishing subclass characteristics from individual characteristics,” it does not offer any standards or guidance for how an examiner should do that. *Monteiro*, 2005 WL 8163021, at *5 (quoting *AFTE 1992 Theory*, 24 AFTE J. 340, 340 (1992)). Recognizing the lack of standards to differentiate between types of characteristics, at least one court has limited expert testimony in part because the expert was unable to state how he distinguished between subclass and individual characteristics. *Green*, 405 F. Supp. 2d at 112–13.

Here, in his examination of the casings, Mr. Stuart identified three toolmarks that he claimed to be individual characteristics that led him to the conclusion that the casings from the different scenes were fired from the same firearm. Namely, he identified a firing pin impression, impressed breech face marks, and firing pin drag. Hr’g Tr. at 55:18–56:1. When asked about the spillover between subclass and individual characteristics, Mr. Stuart stated, “It is definitely something that we have to evaluate for,” but never elaborated as to how he was able to determine that the marks he saw were individual characteristics as opposed to subclass characteristics. *Id.* at

71:23. Importantly, the firearm allegedly used on September 7, 2020 was never recovered. Accordingly, Mr. Stuart was not able to gather known samples for the purpose of eliminating the possibility that the marks he observed were not subclass characteristics. Notably, when taking proficiency tests without a known sample from a particular gun, examiners have refused to make identifications in the absence of a gun, “invoking laboratory policy that identifications *cannot be reached* unless the suspect firearm is examined to eliminate the possibility of subclass characteristics.” Schwartz, *A Systemic Challenge*, *supra* at 10 (emphasis added).

Although the government argues that the *Hunt* opinion stands for the proposition that firearm and toolmark analysis is generally reliable, the instant case significantly differs from the underlying facts in *Hunt*, which ultimately led the Court to find that the expert’s particular methodology was reliable. As noted above, the expert in *Hunt* used the CMS method, which has quantitative criteria for determining what constitutes a match. 63 F.4th at 1245.² In order to match striae, they must have the same “width, morphology, and relative position.” *Id.* Here, Mr. Stuart relied on the AFTE Theory of Identification, which he conceded has no quantitative (or even qualitative) criteria for what is required to determine that individual characteristics are in “sufficient agreement.” Hr’g Tr. at 78:8–9. The expert in *Hunt* found that the cartridge casings had 15 to 20 consecutive matching striae, significantly more than the six required under the CMS method to identify the casings as a match. 63 F.4th at 1245. In the instant case, Mr. Stuart testified that he saw three types of marks that “lined up,” but gave no indication as to how he was able to determine that they were individual characteristics rather than subclass characteristics. Hr’g Tr.

² Although the *Hunt* opinion found that the CMS method as applied in that case was reliable, this Court is careful to note that the CMS method is by no means uncontroversial. Indeed, critics have noted that striae counting is still largely subjective, and different examiners are still likely to come to different conclusions about the same observed striae. Schwartz, *A Systemic Challenge*, *supra* at 17.

57:21–24. Further, Mr. Stuart conceded that the methodology largely relies on examiners “know[ing] a match when they see it.” *Id.* at 79:4–13. Thus, we are given only Mr. Stuart’s subjective determination that three marks on the casings were similar enough to conclude that the casings were fired from the same firearm, without a known sample to eliminate the possibility that the marks were subclass characteristics. This factor thus weighs significantly against finding that Mr. Stuart’s opinion reflects a reliable application of the methodology to the evidence in this case.

5. General Acceptance in the Scientific Community

The fifth *Daubert* factor is whether toolmark analysis has received general acceptance in the “relevant scientific community.” *Daubert*, 509 U.S. at 594. Some courts have found that toolmark examiners are the “relevant scientific community” and that the AFTE Theory is generally accepted in that community. *Ashburn*, 88 F. Supp. 3d at 247; *Johnson*, 2019 WL 1130258, at *19; *Romero-Lobato*, 379 F. Supp. 3d at 1122 (finding that the AFTE Theory is widely accepted among toolmark examiners). However, as noted above, toolmark examiners “have a vested, career-based interest” in acceptance of the AFTE Theory. *Shipp*, 422 F.Supp.3d at 782. Scientists outside of the field of toolmark examination have sharply criticized the field, as noted by the NRC and PCAST reports. For this reason, other courts have found that adopting a narrow view of the “relevant community” distorts the perceived acceptance of firearm and toolmark analysis. *Id.* (citing *Kumho Tire*, 526 U.S. at 151).

Indeed, some scientists have criticized the entire theory of “object individualization” upon which toolmark analysis rests. “Object individualization” is the idea that objects, such as guns, have enough discernible individual characteristics such that the object can be placed “in a unit category that consists of a single unit.” Michael J. Saks, Jonathan J. Koehler, *The Individualization Fallacy in Forensic Science Evidence*, 61 Vand. L. Rev. 199, 206 (2008). Saks and Koehler argue

that “the claim of unique individuality” is not “scientifically compelling” and is largely based on unprovable hypotheses. *Id.* at 209. They note that “criminalists across disciplines have made no systematic, concerted effort to find different objects that produce identical markings.” *Id.* at 212. Without extensive testing of a large database, Saks and Koehler argue that “forensic scientists are not able to link . . . a toolmark . . . to its unique source.” *Id.* at 218. Other reviewers have argued that any claims that firearm examiners can match marks to a particular gun with certainty “are patently absurd.” MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY §29:16; *see also*, Schwartz, *A Systematic Challenge*, *supra* at 4 (noting several “systemic scientific problems with firearms and toolmark identification”); David L. Faigman, et. al, “The Field of Firearms Forensics is Flawed,” *Scientific American* (May 25, 2022) (“firearms identification is a field built largely on smoke and mirrors”); Mark Page, et. al., *Uniqueness in the Forensic Identification Sciences – Fact or Fiction?* 206 *Forensic Sci. Int.* 12, 12 (2011) (“[M]uch of the literature claiming to have proven uniqueness in the forensic identification sciences is methodologically weak and suffers flaws that negate any such conclusion being drawn.”). Given this scientific criticism, in addition to the NRC and PCAST criticism discussed above, this factor also weighs against the reliability of toolmark evidence.

Thus, at least three of the *Daubert* factors (error rate, existence of standards, and general acceptance) weigh against finding reliable Mr. Stuart’s opinion that the casings from the different scenes were fired from the same firearm.

B. Limitations on Mr. Stuart’s Testimony

Although it appears that no federal or state court has completely excluded testimony from toolmark examiners, there is a “tension between the long history of routine admission of toolmark identification evidence, and a rising tide of criticism regarding forensic evidence in general.”

Johnson, 2019 WL 1130258, at * 12. Further, as noted above, the proposed amendments to Rule 702 reflect the Advisory Committee’s intention to limit the routine admission of forensic expert testimony and empower courts to fulfill their gatekeeping obligation. Given these proposed amendments and the Court’s concerns regarding the reliability of toolmark identification evidence, the Court will allow Mr. Stuart to testify, but will limit his testimony as follows:

- He may testify as to his process of examining the recovered casings and bullets.
- He may describe the theory of toolmark analysis and how firearms can leave markings on bullets and shell casings.
- He may describe the process he undertook to compare the casings and bullet fragments.
- He may testify that he found certain areas of comparison that are similar, namely the firing pin impression, impressed breech face marks, and firing pin drag. However, he may not testify that these markings are consistent with casings fired from the same firearm.
- He may not testify, to any degree of certainty, that the items were fired from the same firearm, including whether his observations exclude other firearms “to a level of practical impossibility.”
- He may not testify that any cartridge case or bullet fragment is a “match” to other casings or bullet fragments.

The Court finds that these limitations are warranted for several reasons. First, they are necessary to address the concerns identified in the precedent discussed above about the science of toolmark analysis. *See Davis*, 2019 WL 4306971, at *6; *Shipp*, 422 F. Supp. 3d at 783; *Monteiro*, 407 F. Supp. 2d at 375; *Glynn*, 578 F. Supp. 2d at 570.

Next, the limitations are necessary to address the concerns identified in *Daubert* and *Kumho Tire* “about the impact of expert testimony on the jury.” *Green*, 405 F.Supp.2d at 118. Because expert witnesses are given greater leeway than lay witnesses, “a certain patina attaches it to the testimony, running the risk that the jury, labeling it ‘scientific,’ will give it more credence than it deserves.” *Id.* The impact of expert testimony on juror decision-making has been studied

extensively. *See, e.g.* Nancy Brekke & Eugene Borgida, *Expert Psychological Testimony in Rape Trials: A Social-Cognitive Analysis*, 55 J. Personality & Soc. Psych. 372 (1988) (noting that introduction of expert testimony by prosecution tends to increase conviction rates); Suzanne Blackwell & Fred Seymour, *Expert Evidence and Jurors' Views on Expert Witnesses*, 22 Psychiatry, Psychol., & L. 673 (2015) (providing an extensive overview of studies on impact of expert testimony on jurors). With respect to firearm and toolmark analysis testimony, at least one study found that where experts phrased their findings in terms of a “match,” or opine that it was a “practical impossibility” for casings to come from different firearms, jurors were more certain of the expert’s findings. Sarah L. Cooper & Paraic Scanlon, *Juror Assessment of Certainty about Firearms Identification Evidence*, 40 U.A.L.R. L. Rev. 95, 115 (2017). The same study further found that experts carried significant persuasive authority with jurors even where they qualified their findings by saying that the casings were a match “to a reasonable degree of certainty,” or that casings were “more likely than not” to be a match. *Id.* at 116.

Finally, the limitations are necessary to address the concern identified in proposed amendments to Rule 702 about “overstatement” in expert testimony. Advisory Committee on Evidence Rules, Report to the Standing Committee, May 15, 2022. This concern is particularly salient here, where, despite Mr. Stuart’s testimony that he was “100% confident” in his determination that the casings were a match, Hr’g Tr. at 88:4, the absence of a known sample from the suspect firearm renders it impossible to eliminate the possibility that the relevant marks are common to a batch of firearms that underwent the same manufacturing process, as opposed to having been fired from the same firearm. *See* Comment to Proposed Amendments to Rule 702 (“Expert opinion testimony regarding the weight of feature comparison evidence (i.e., evidence that a set of features corresponds between two examined items) must be limited to those inferences


that can reasonably be drawn from a reliable application of the principles and methods.”).

CONCLUSION

Following the *Hunt* Court’s directive to “be cautious” in admitting toolmark analysis testimony, the Court finds that there are serious reliability problems not only with the AFTE Theory of Identification in general, but also with Mr. Stuart’s application of the theory and methods to the evidence in this case. In keeping with the proposed amendments to Rule 702, the Court takes its gatekeeping role seriously. Accordingly, Mr. Stuart’s testimony will be limited to prevent any overstatement of his findings and any undue influence on the jury.

IT IS THEREFORE ORDERED that Mr. Briscoe’s Objection to the Government’s Notice of Toolmark Expert [Doc. 149] is **OVERRULED**, but Mr. Stuart’s testimony shall be restricted in accordance with this Memorandum Opinion and Order.

ENTERED this 21st day of November 2023.



MARTHA VÁZQUEZ
SENIOR UNITED STATES DISTRICT JUDGE